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EXAMINER	
NORTON, JENNIFER L	

ART UNIT	PAPER NUMBER
2121	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/810,377	TABOR, KEITH A.	
	Examiner	Art Unit	
	Jennifer L. Norton	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 March 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 March 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 3/26/04
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-28 are pending.

Claim Objections

2. Claim 14 is objected to because of the following grammatical informalities:

Claim 14 recites, "... generating first error value and generating first error value ...". An "a" should precede each error value.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. Claim 14 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 14 recites, "... generating first error value and generating first error value ...". For examination purposes, the examiner has interpreted this limitation as "generating a first error value and generating a second error value ...".

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. The following claim recite the limitations:

Claim 1:

a. "the angle of the member" in lines 1-2 and 11

b. "the length of the member" in lines 3-4 and 11-12

Claim 2:

c. "the point on the member" in line 2

Claim 3:

d. "the point on the member" in line 3 and 5

Claim 5:

e. "the angle of the member" in lines 1-2 and 10-11

f. "the length of the member" in lines 3-4 and 12-13

Claim 8:

g. "the angle of the member" in line 6

h. "the pitch angle of the machine" in line 7

i. "the angular pitch velocity" in line 8

j. "the length of the member" in line 8-9

Claim 9:

k. "the angular position" in line 2 and 3

Claim 10:

l. "the length of the member" in line 2 and 3

Claim 12:

m. "the angle of the member" in lines 2-3

n. "the length of the member" in lines 4-5

Claim 16:

o. "the angle of the member" in line 2

Claim 20:

p. "the length of the member" in lines 13 and 16

Claim 25:

q. "the angle of the member" in line 2 and 11

r. "the length of the member" in lines 3 and 13

Claim 28:

s. "the machine" in line 2

t. "the length of the member" in lines 5

There is insufficient antecedent basis for the limitations of the claims presented above.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1, 5, 20 and 25 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 10 of U.S. Patent No. 7,093,383. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1, 5, 20 and 25 are generic to the species of

the invention covered by claim 10 of the patent. Thus, the generic invention is "anticipated" by the species of the patented invention. The same reasoning as set forth above applies to the double patenting rejection of the dependent claims.

Claims 1, 5, 20 and 25 of the instant application is anticipated by patent claim 10 of U.S. Patent No. 7,093,383. Claims 1, 5, 20 and 25 of the instant application therefore is not patently distinct from the earlier patent.

"A later patent claim is not patentably distinct from an earlier patent claim if the later claim is obvious over, or **anticipated by**, the earlier claim. In re Longi, 759 F.2d at 896,225 USPQ at 651 (affirming a holding of obviousness-type double patenting because the claims at issue were obvious over claims in four prior art patents); In re Berg, 140 F.3d at 1437, 46 USPQ2d at 1233 (Fed. Cir. 1998) (affirming a holding of obviousness type double patenting where a patent application claim to a genus is anticipated by a patent claim to a species within that genus). " ELI LILLY AND COMPANY v BARR LABORATORIES, INC., United States Court of Appeals for the Federal Circuit, ON PETITION FOR REHEARING EN BANC (DECIDED: May 30, 2001).

"Claim 12 and Claim 13 are generic to the species of invention covered by claim 3 of the patent. Thus, the generic invention is **"anticipated"** by the species of the patented invention. Cf., Titanium Metals Corp. v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) (holding that an earlier species disclosure in the prior art defeats any generic claim) 4 . This court's predecessor has held that, without a terminal disclaimer, the species claims preclude issuance of the generic application. In re Van Ornum, 686 F.2d 937, 944, 214 USPQ 761, 767 (CCPA 1982); Schneller, 397 F.2d at 354. Accordingly, absent a terminal disclaimer, claims 12 and 13 were properly rejected under the doctrine of obviousness-type double patenting." (In re Goodman (CA FC) 29 USPQ2d 2010 (12/3/1993)

Drawings

8. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Fig. 1, element 110. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-7, 9-13, 15-18 and 20-28 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S Patent No. 6,374,153 (hereinafter Brandt).

11. As per claim 1, Brandt discloses a method for controlling movement of a member wherein the angle of the member with respect to a reference is alterable by a first actuator and the length of the member is alterable by a second actuator, the method comprises:

producing a command which designates a desired velocity that a point on the member is to travel along a desired substantially straight line path (col. 3, lines 20-23 and col. 4, lines 5-10);

transforming the command into a desired first velocity for the first actuator (col. 4, lines 11-13);

transforming the command into a desired second velocity for the second actuator (col. 4, lines 11-13);

operating the first actuator in response to the desired first velocity to alter the angle of the member (col. 2, lines 58-60 and Fig. 1, element 140); and

operating the second actuator based on the desired length velocity to alter the length of the member (col. 2, lines 60-63 and Fig. 1, element 150).

12. As per claim 2, Brandt discloses producing a command comprises designating a first desired velocity that the point on the member is to travel along a first axis (col. 3, lines 16-19 and lines 23-26).

13. As per claim 3, Brandt discloses producing a command comprises:

designating a first desired velocity that the point on the member is to travel along a first axis (col. 3, lines 16-19 and lines 23-26); and

designating a second desired velocity that the point on the member is to travel along a second axis that is orthogonal to the first axis (col. 3, lines 16-19 and lines 20-23).

14. As per claim 4, Brandt discloses transforming the command into a desired first velocity for the first actuator comprises:

transforming the command into a desired angular velocity for the member (col. 3, lines 16-19 and col. 4, lines 4-13); and

converting the desired angular velocity into the desired first velocity (col. 5, lines 1-13).

15. As per claim 5, Brandt discloses a method for controlling movement of a member wherein the angle of the member with respect to a reference is alterable by a first actuator and the length of the member is alterable by a second actuator, the method comprises:

producing a command which designates a desired velocity that a point on the member is to travel along a desired substantially straight line path (col. 3, lines 20-23 and col. 4, lines 5-10);

transforming the command into a desired angular velocity and a desired length

velocity for the member (col. 4, lines 4-13);

converting the desired angular velocity for the member into a desired first velocity for the first actuator (col. 5, lines 1-13);

operating the first actuator in response to the desired first velocity to alter the angle of the member (col. 5, lines 21-26); and

operating the second actuator based on the desired length velocity to alter the length of the member (col. 5, lines 21-26).

16. As per claim 6, Brandt discloses producing a command comprises designating a first desired velocity that the point on the member is to travel along a first axis (col. 3, lines 16-19 and lines 23-26).

17. As per claim 7, Brandt discloses producing a command comprises:

designating a first desired velocity that the point on the member is to travel along a first axis (col. 3, lines 16-19 and lines 23-26); and

designating a second desired velocity that the point on the member is to travel along a second axis that is orthogonal to the first axis (col. 3, lines 16-19 and lines 20-23).

18. As per claim 9, Brandt discloses transforming the command utilizes the angular position of the member which is derived by sensing a dimension of the first actuator

and converting that position into the angular position of the member (col. 4, lines 18-23 and Fig. 2, element 220).

19. As per claim 10, Brandt discloses transforming the command utilizes the length of the member which is derived by sensing a dimension of the second actuator and converting that dimension into the length of the member (col. 4, lines 18-20, lines 23-25 and Fig. 2, element 230).

20. As per claim 11, Brandt discloses converting the desired length velocity for the member into a second velocity for the second actuator, wherein operating the second actuator is in response to the second velocity (col. 4, lines 18-20).

21. As per claim 12, Brandt discloses the method as set forth above further comprising:

sensing a first parameter of the machine to produce a first signal denoting the angle of the member relative to a reference (col. 4, lines 20-23);

sensing a second parameter of the machine to produce a second signal denoting the length of the member (col. 4, lines 23-25);

deriving an actual angular velocity of the member from the first signal (col. 4, lines 18-20); and

deriving an actual length velocity of the member from the second signal (col. 4, lines 18-20).

22. As per claim 13, Brandt discloses the method as set forth above further comprising:

generating first error value corresponding to a difference between the actual angular velocity and the desired angular velocity (col. 4, lines 31-34);

generating second error value corresponding to a difference between the actual length velocity and the desired length velocity (col. 4, lines 31-34);

adjusting the desired angular velocity in response to the first error value to produce a corrected desired angular velocity which is employed in operating the first actuator (col. 5, lines 1-13); and

adjusting the desired length velocity in response to the second error value to produce a corrected desired length velocity which is employed in operating the second actuator (col. 5, lines 1-13).

23. As per claim 15, Brandt discloses sensing a first parameter senses a dimension of the first actuator (col. 4, lines 18-23 and Fig. 2, element 220).

24. As per claim 16, Brandt discloses sensing a first parameter senses the angle of the member relative to a reference (col. 4, lines 11-13).

25. As per claim 17, Brandt discloses sensing a second parameter of the machine senses a dimension of the second actuator (col. 4, lines 18-20, lines 23-25 and Fig. 2, element 230).

26. As per claim 18, Brandt discloses the method as set forth above further comprising:

sensing a first parameter of the first actuator (col. 4, lines 20-23);

sensing a second parameter of the second actuator (col. 4, lines 20-25);

in response to the first parameter, deriving an actual velocity of the first actuator (col. 4, lines 18-20);

in response to the second parameter, deriving an actual velocity of the second actuator(col. 4, lines 18-20);

generating a first error value corresponding to a difference between the actual velocity of the first actuator and the desired first velocity (col. 4, lines 31-34);

generating a second error value corresponding to a difference between the actual velocity of the second actuator and the desired second velocity (col. 4, lines 31-34);

adjusting the desired first velocity in response to the first error value to produce a result which is used in operating the first actuator (col. 5, lines 1-13); and

adjusting the desired second velocity in response to the second error value

to produce another result which is used in operating the second actuator (col. 5, lines 1-13).

27. As per claim 20, Brandt discloses a method for controlling movement of a member, wherein an angle of the member with respect to a reference is alterable by a first actuator and the member has a first section that extends from a second section by an amount that is varied by a second actuator, the method comprises:

designating a first desired velocity that a point on the member is to travel along a first axis (col. 3, lines 16-19 and lines 23-26);

designating a second desired velocity that a point on the member is to travel along a second axis which is orthogonal to the first axis (col. 3, lines 16-19 and lines 20-23);

sensing a first parameter that indicates a position of the member (col. 4, lines 20-23);

deriving an angular position of the member from the first parameter (col. 4, lines 18-20);

sensing a second parameter that indicates an amount that the first section extends from the second section (col. 4, lines 23-25);

deriving the length of the member from the second parameter (col. 4, lines 18-20);

transforming the first and second desired velocities into a desired angular

velocity and a desired length velocity for the member, wherein that transforming is based on the angular position and the length of the member (col. 4, lines 4-13);

converting the desired angular velocity for the member into a desired first velocity for the first actuator (col. 5, lines 1-13);

operating the first actuator in response to the desired first velocity to alter the angle of the member (col. 5, lines 21-26); and

operating the second actuator based on the desired length velocity to alter the length of the member (col. 5, lines 21-26).

28. As per claim 21, Brandt discloses sensing a second parameter comprises sensing a dimension of the second actuator (col. 4, lines 18-20, lines 23-25 and Fig. 2, element 230).

29. As per claim 22, Brandt discloses converting the desired angular velocity comprises:

deriving an actual angular velocity of the member from the first parameter (col. 4, lines 18-20);

generating first error value corresponding to a difference between the actual angular velocity and the desired angular velocity (col. 4, lines 31-36); and

adjusting the desired angular velocity in response to the first error value to produce a corrected desired angular velocity which is employed in operating the first actuator (col. 5, lines 1-13).

30. As per claim 23, Brandt discloses operating the second actuator comprises converting the desired length velocity for the member into a desired second velocity for the second actuator (col. 5, lines 1-13).

31. As per claim 24, Brandt discloses converting the desired length velocity comprises:

deriving an actual length velocity of the member from the second parameter (col. 4, lines 18-20);

generating second error value corresponding to a difference between the actual length velocity and the desired length velocity (col. 4, lines 31-34); and

adjusting the desired length velocity in response to the second error value to produce a corrected desired length velocity which is employed in operating the second actuator (col. 5, lines 1-13).

32. As per claim 25, Brandt discloses a control system for a member which is movable by first and second actuators that respectively control the angle of the member relative to a reference and the length of the member, the control system comprising:

an input apparatus (Fig. 2, element 270) that produces a command designating a desired velocity of a point on the member along a desired substantially straight line path (col. 3, lines 20-23 and col. 4, lines 5-10);

a transformation function coupled to the input apparatus and converting the command into an angular velocity and a length velocity for the member (col. 4, lines 11-13);

a first converter which translates the angular velocity for the member into a first velocity at which the first actuator is to move (col. 5, lines 1-13);

a first driver for operating the first actuator in response to the first velocity to alter the angle of the member (col. 5, lines 30-33 and lines 37-39); and

a control element for operating the second actuator in response to the length velocity to alter the length of the member (col. 5, lines 34-39).

33. As per claim 26, Brandt discloses command produced by the input apparatus designates a first desired velocity along a first axis and a second desired velocity along a second axis that is substantially orthogonal to the first axis (col. 3, lines 20-27).

34. As per claim 27, Brandt discloses the control element comprises:

a second converter which translates the length velocity for the member into a second velocity at which the second actuator is to move (col. 5, lines 1-13); and

a second driver for operating the second actuator in response to the second

velocity to alter the length of the member (col. 5, lines 34-39).

35. As per claim 28, Brandt discloses the control system as set forth above further comprising:

a first sensor that produces a first signal indicating a first parameter of the machine which denotes the angle of the member relative to a reference (col. 4, lines 11-13, lines 20-23 and Fig. 2, element 220);

a second sensor producing a second signal that denotes the length of the member (col. 4, lines 23-25 and Fig. 2, element 230);

a first differentiator that derives an actual angular velocity of the member from the first signal (col. 4, lines 18-20);

a second differentiator that derives an actual length velocity of the member from the second signal (col. 4, lines 18-20);

an angle controller which generates first error value corresponding to a difference between the actual angular velocity and the desired angular velocity (col. 4, lines 31-34);

a length controller which generates second error value corresponding to a difference between the actual length velocity and the desired length velocity (col. 4, lines 31-34);

a first adjusting element that alters the desired angular velocity in response to the first error value to produce a corrected desired angular velocity which is applied to the first converter (col. 5, lines 1-13); and

a second adjusting element that alters the desired length velocity in response to the second error value to produce a corrected desired length velocity which is employed by the control element in operating the second actuator (col. 5, lines 1-13).

Claim Rejections - 35 USC § 103

36. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

37. Claim 8, 14 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brandt in view of U.S. Patent No. 4,332,517 (hereinafter Igarashi).

38. As per claim 8, Brandt does not expressly teach to transforming the command utilizes the relationships defined by the equations:

$$\dot{X} = \cos(\theta+\gamma)\,\dot{L} + (-L\sin(\theta+\gamma) + d\cos(\theta+\gamma))\,(\dot{\theta}+\dot{\gamma})$$

$$\mp\dot{Y} = \sin(\theta+\gamma)\,\dot{L} + (L\cos(\theta+\gamma) + d\sin(\theta+\gamma))\,(\dot{\theta}+\dot{\gamma})$$

where $\dot{X}$ is velocity of the point on the member along the first axis, $\dot{Y}$ is velocity of the point on the member along the second axis, θ is the angle of the member, $\dot{\theta}$ is the angular velocity of the member, γ is the pitch angle of a machine on which the member is mounted, $\dot{\gamma}$ is the angular pitch velocity of the machine, $\dot{L}$ is the rate at which the length

of the member is changing, and d is a distance that the point is offset from a longitudinal axis of the member.

Igarashi teaches to using a transforming command (col. 5, lines 1-67 and col. 6, lines 1-35).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Brandt to include transforming the command to improve the stability, accuracy and response to the feedback control system (col. 58-59).

39. As per claim 14, Brandt does not expressly teach generating first error value and generating first error value both utilize a proportional-integral-derivative control function.

Igarashi teaches to using a PID controller (col. 6, lines 60-61).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Brandt to include a PID

controller to improve the stability, accuracy and response to the feedback control system (col. 58-59).

40. As per claim 19, Brandt does not expressly teach generating a first error value and generating a second error value both utilize a proportional-integral-derivative control function.

Igarashi teaches to using a PID controller (col. 6, lines 60-61).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Brandt to include a PID controller to improve the stability, accuracy and response to the feedback control system (col. 58-59).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following references are cited to further show the state of the art with respect a control system for a construction machine.

U.S. Patent No. 6,986,264 discloses a system and method for controlling a mechanical arm.

U.S. Patent No. 6,473,679 discloses an angular velocity control for a boom of a machine is disclosed and a method for controlling the angular velocity of a boom of a machine.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer L. Norton whose telephone number is 571-272-3694. The examiner can normally be reached on 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 571-272-3687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO

Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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